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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,953	11/21/2003	Jeffrey Collins	KPG-5098US	4426

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EXAMINER

LEE, SIN J

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/718,953

Applicant(s)

COLLINS ET AL.

Examiner

Sin J. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 16-26, 28 and 30-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19-26, 28 and 32-36 is/are allowed.
- 6) ☒ Claim(s) 1-14, 16 and 17 is/are rejected.
- 7) ☒ Claim(s) 18, 30 and 31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/4/2005</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicants canceled claims 15, 27, and 29.
2. In view of amendment of April 25, 2005 and also in view of applicants' statement that Haley et al (6,806,020) and the subject matter of the claimed invention were, at the time the claimed invention was made, owned by the same person or subject to an obligation of assignment to the same person, previous 102(e) rejection on claims 1-14, 16, and 17 over Haley et al'020 and previous 103(a) rejection on claim 15 over Haley et al'020 in view of McKeever'190 are hereby withdrawn.
3. In view of new grounds of rejection, the following rejection is made non-final.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 1-14, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al (5,919,601) in view of Hayakawa et al (US 2003/0113655 A1) and Patel et al (US 6,803,167 B2).

Nguyen teaches (see claims 1, 8, 11, 13, and 22) a radiation sensitive composition, *which is imageable by infrared and ultraviolet/visible radiation*, comprising (i) a crosslinking resin such as *resole resin*, (ii) a binder resin containing *alkoxymethyl amide* pendant groups, (iii) a UV/visible radiation-activated acid generator such as *diazonium salt*, and an indicator dye (*a colorant*). As the anion for the diazonium salt, Nguyen includes (see claim 14) tetrafluoroborate, hexafluorophosphate, hexafluoro-

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arsenate, hexafluoroantimonate, triflate, tetrakis(penta-fluorophenyl)borate, pentafluoroethyl sulfonate, and p-methylbenzene sulfonate.

Nguyen coats his composition solution onto a substrate, and Nguyen teaches that his coated substrate can be imagewise exposed to UV/visible radiation source when an UV/visible radiation-activated acid generator is incorporated in the composition (col.5, lines 64-67, col.6, lines 1-17). The exposed printing plate is heated and then developed using conventional aqueous, alkaline developing solutions. Therefore, Nguyen teaches present invention of claim 1 except for using (i) present acid generator in which the anion is an organic sulfate anion or an organic thiosulfate anion and (ii) present solvent based developer.

Hayakawa et al teaches (see [0039], [0043] and [0044]) the equivalence of *sulfate* and those anions listed in Nguyen's claim 14 as non-volatile acid anions for an onium salt which increases the speed of thermally imageable, pre-heated, negatively working patterning composition, especially printing plates. Since those anions listed in Nguyen and sulfate were art-recognized equivalents at the time the invention was made, it would have been obvious to one skilled in the art to have a diazonium salt having sulfate anion as Nguyen's UV/visible radiation-activated acid generator with a reasonable expectation of increasing the speed of Nguyen's patterning composition. Therefore, Nguyen in view of Hayakawa would render obvious present acid generator in which the anion is an organic sulfate anion.

Patel teaches the use of a developer, which is a mixture of an aqueous alkaline developer and a *solvent based developer* that contains 0.5-15 wt.% of an organic

solvent, for developing imageable elements which are imageable with either thermal or UV radiation (see abstract). Patel states (col.1, lines 59-67, col.2, line 1) that by using such developer, the same developer can be used regardless of the type of imaging (i.e., either UV or thermal imaging). Since Nguyen's printing plate is also imageable by infrared or UV radiation, it would have been obvious to one skilled in the art to use Patel's developer mixture containing a solvent based developer so that the same developer can be used whether the printing plate is imaged using infrared or UV radiation. Therefore, Nguyen in view of Patel would render obvious present solvent-based developer.

Therefore, Nguyen in view of Hayakawa and Patel would render obvious present inventions of claims 1, 3, 4, 6-8, 14, 16, and 17.

With respect to present claim 2, Nguyen teaches (col.2, lines 12-14) that his printing plates are adapted for "direct-to-plate" imaging. Therefore, Nguyen in view of Hayakawa and Patel would render obvious present invention of claim 2.

With respect to present claim 5, as one of examples for his binder resin, Nguyen discloses poly(*N*-methoxymethyl methacrylamide/2-phenylethyl methacrylate/methacrylic acid. Therefore, Nguyen in view of Hayakawa and Patel would render obvious present invention of claim 5.

With respect to present 9, although Nguyen teaches a diazonium salt, the reference does not give any detail as to the cation of the diazonium salt. Hayakawa teaches 2-methoxy-4-phenylaminobenzenediazonium salt as particularly preferred aromatic diazonium salt used as an acid generator, which is an UV, visible or infrared

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radiation or heat activated compound (see [0039], [0050], [0051]). Since Nguyen does not give any detail as to the cation of his diazonium salt, it would have been obvious to one skilled in the art to use the 2-methoxy-4-phenylaminobenzenediazonium salt (which is known in the art as particularly preferred diazonium salt used as an acid generator, which is an UV, visible or infrared radiation or heat activated compound) as Nguyen's UV/visible radiation-activated acid generator. Therefore, Nguyen in view of Hayakawa and Patel would render obvious present invention of claim 9.

With respect to present claim 10, Nguyen teaches (col.3, lines 10-26) that *one or more polymers* can be used as his binder resin, and as one of examples for his binder resin, Nguyen includes a novolac resin. Therefore, based on Nguyen's teaching, it would have been obvious to one skilled in the art to use the combination of poly(*N-methoxymethyl methacrylamide*/2-phenylethyl methacrylate/methacrylic acid and a novolac resin as Nguyen's binder resin with a reasonable expectation of obtaining a printing plate having significantly greater press life. Therefore, Nguyen in view of Hayakawa and Patel would render obvious present inventions of claims 10-13.

Allowable Subject Matter

6. Claims 18, 30, and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Nguyen does not teach or suggest present method of claim 18 in which about 20 mJ/cm^2 or less of imaging energy is used in the imaging step (a). Nguyen does not teach or suggest present method of claim 30 in which about 10 mJ/cm^2 or less of imaging energy is used in the imaging step

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(a). Nguyen does not teach or suggest present method of claim 31 in which about 5-6 mJ/cm² of imaging energy is used in the imaging step (a).

7. Claims 19-26, 28, and 32-36 are allowed. Nguyen does not teach or suggest present method of claim 32 in which about 20 mJ/cm² or less of imaging energy is used in the imaging step (a).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is 571-272-1333. The examiner can normally be reached on Monday-Friday from 9:00 am EST to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. J. Lee

S. Lee
July 10, 2005

Sin J. Lee
SIN LEE
PRIMARY EXAMINER